

## Claims

1. A fuel supply pump which includes a plurality of plunger barrels, plungers and tappet structural bodies in the inside of a pump housing, wherein,

a plurality of accommodating portions for arranging the plurality of plunger barrels in parallel to each other is formed in the inside of the pump housing and an inter-cylinder connecting portion which allows lubricant or lubricating fuel to pass therethrough is provided between the plurality of accommodating portions.

2. A fuel supply pump according to claim 1, wherein the inter-cylinder connecting portion is arranged at a position higher than an elevated position of the tappet structural body.

3. A fuel supply pump according to claim 1 or 2, wherein the inter-cylinder connecting portion is arranged substantially perpendicular to or inclined with respect to the arranging direction of the plurality of plunger barrels.

4. A fuel supply pump according to any one of claims 1 to 3, wherein a cross-sectional area of the inter-cylinder connecting portion is set to a value which falls within a range of 10 to 350 mm<sup>2</sup>.

5. A fuel supply pump according to any one of claims 1 to 4, wherein a valve portion is provided to a middle portion of the inter-cylinder connecting portion.

6. A fuel supply pump according to any one of claims 1 to 5, wherein a communicating portion which allows lubricant or lubricating fuel to pass therethrough is formed in the tappet structural body.

7. A fuel supply pump according to any one of claims 1 to 6, wherein a fuel whose flow rate per unit time is 500 to 1500 liter/hour is used in a booster type accumulator fuel injection device which increases a pressure of the fuel to 50 MPa or more.